

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Utilities Telecom Council and Winchester)	RM No. 11429
Cator, LLC)	
)	
Petition for Rule Making to Establish Rules)	
Governing Critical Infrastructure Industry)	
Fixed Service Operations in the 14.0–14.5)	
GHz Band)	

To: The Commission

OPPOSITION OF ARTEL INC.

I. INTRODUCTION

Artel Inc. (“Artel”) hereby opposes the above-captioned Petition for Rule Making (“Petition”) submitted by the Utilities Telecom Council (“UTC”) and Winchester Cator, LLC (“Winchester”) (collectively “Petitioners”).¹ For the reasons explained below, the Federal Communications Commission (“Commission”) should determine that the Petition should be denied without further action.

Artel is a global leader in telecom and information technology providing a full spectrum of network management, systems integration, and information assurance services and technologies for the critical business objectives of our clients. ARTEL provides ku-band VSAT technologies and solutions to our U.S. military and civilian government customers that are critical to the daily operations of our country in the areas of defense, homeland security,

¹ The Commission requested comments on the Petition in a recent public notice. See “Consumer & Governmental Affairs Bureau Reference Information Center Petition for Rule Makings Filed”, Public Notice, Report No. 2868 (rel. May 27, 2008).

emergency management, aeronautics, and virtually every area of government communications. As the leading satellite procurement contractor for the U.S. military, ARTEL has a unique responsibility to provide the U.S. Department of Defense with around the clock, absolutely reliable satellite communications for this nation's defense operations. ARTEL provides satellite communications services in the ku-band to every branch of the U.S. military, as well as the Departments of State, Commerce, Treasury, Energy and the Interior; the Department of Homeland Security including the Federal Emergency Management Agency (FEMA), Customs and Border Patrol, the National Institutes of Health as well as many local, state and international government programs.

II. DISCUSSION

Petitioners have proposed that the Commission commence a rulemaking proceeding to amend Parts 2 and 101 of the Commission's Rule to permit shared, secondary terrestrial fixed service use of the 14.0-14.5 GHz band for what Petitioners call critical infrastructure industry ("CII") communications.²

The 14.0-14.5 GHz fixed-satellite services ("FSS") uplink band that the Petitioners seek to litter with its fixed point-to-point and point-to-multipoint systems is currently allocated only to fixed satellite operations. Currently in the ku-band, in fact, the U.S. Department of Defense's commercial ku-band satellite usage is now over 80% of its total satellite usage. In addition, every branch of the U.S. Government uses commercial ku-band satellite capacity for its day to day and critical operations.

² *Utilities Telecom Council and Winchester Cator, LLC Petition for Rulemaking to Establish Rules Governing Critical Infrastructure Industry Fixed Service Operations in the 14.0-14.5 GHz Band*, Petition for Rulemaking, RM - No. 11429, at 1, filed May 6, 2008 ("Petition").

There is no fixed service allocation in this band and we are concerned that the Petitioner's proposed system will cause uncontrollable and insurmountable interference to our current U.S. government users. Such interference is unacceptable to military and civilian government operations and will be devastating to our national defense and government operations.

The adoption of Petitioners' proposed secondary, terrestrial FS service would adversely impact our government customers, the FSS industry and its current and future uses of the 14.0-14.5 GHz band. The proposal does not explain why a new FS allocation is needed when existing FS allocations are unused or underused.

A. Petitioners' Proposal for Secondary FS in the 14.0-14.5 GHz Band Would Not Protect Present and Future FSS Operations.

Petitioners ignore the overwhelming body of technical work that shows ubiquitous terrestrial services and ubiquitous satellite services cannot coexist in the same spectrum.

VSAT terminals are blanket licensed, meaning that they can be located at any point in the country and that a location that had no VSAT terminal yesterday could very well have one tomorrow. Due to this flexibility, an FS operator will not know where VSAT and other FSS terminals are or may be, and thus is completely unable to assure their protection. Because the Petitioners' proposal seeks blanket licensing of CII terminals in the 14.0-14.5 GHz band, our U.S. government customers would not be quickly or easily be able to locate an interfering CII terminal and/or identify who was operating the problematic terminal, to the potential detriment of critical U.S. government operations. This is a chilling threat to safety of life and national security operations that depend on satellite communications in the Ku-band.

B. Petitioners Fail to Explain Why It Is Necessary to Use An FSS Band for Their Proposed CII/Commercial FS Service When Unused Or Underused FS Bands Are Available.

Petitioners claim the licensed and unlicensed frequency bands that CII entities currently operate in “are plagued by congestion and interference and are insufficient to meet the growing spectrum needs – especially high-speed data – of CII entities.”³ This claim is completely arbitrary and insufficient to support the Petitioners’ proposal to use the primary FSS VSAT uplink band when frequency bands allocated on a primary basis to the FS appear to be available.

Primary FS spectrum is available in many other frequency bands, such as 27 GHz, 38 GHz, and 71 GHz. Furthermore, since even the Petitioners admit that FS links in the 14.0-14.5 GHz band would be substantially affected by interference from ubiquitous FSS uplinks it is incumbent upon petitioners to prove to the FCC why the existing spectrum is insufficient to meets its requirements. Because Petitioners offer no justification for their selection of the 14.0-14.5 GHz band over other apparent spectrum options, the Commission should not make a new FS allocation when existing frequency bands with available spectrum are already allocated for terrestrial wireless services.

C. The ITU Radio Regulations and Table of Frequency Allocations Make it Impossible for a Secondary FS Service to be Offered in the United States in the 14.0-14.5 GHz Band.

The Petitioners’ proposal for FS networks in the 14.0-14.5 GHz band is incompatible with the International Telecommunication Union (“ITU”) Radio Regulations (“RRs”). The ITU RRs do not contain any FS allocation in the 14.0-14.4 GHz band in ITU Region 2, which encompasses the U.S. Of course, the lack of an international allocation does not automatically preclude the

³*Petition* at 8.

Commission from authorizing FS operations that are conducted on a non-harmful interference, non-protected basis with respect to all authorized other services.⁴

To the extent that the Petitioners seek to revise the U.S. Table of Frequency Allocations, such a revision would only allow the Commission to dictate interference conditions for U.S.-licensed satellites over which it has control. There are a number of satellites that are licensed by other countries that occupy orbital locations over the Americas that could well be negatively affected by RR No. 4.4 FS operations in the United States.⁵ Nothing the Commission does can take away these countries' rights to have their satellites operate free from FS services that are provided in violation of the RRs. In addition, many of our U.S. government customers use foreign-licensed satellites that provide service to the U.S. via the FCC's Permitted Space Station list; derogation from the RRs would jeopardize critical USG operations.

D. Petitioners' Proposal to Have Their CII FS Stations and Links Accept All Interference from FSS Networks is Doubtful; "Critical" Services Are Not Protected on a Secondary Basis.

The Petitioners' claim that their FS wireless services will accept all interference from FSS systems is unrealistic due to the emergency nature and technical specification of the proposed CII systems. The Petitioners state that CII applications are "critical" and "require high

⁴ See ITU RR No. 4.4, which permits Administrations to make frequency assignments that are contrary to the Table of Frequency Allocations, provided that "such a station, when using such a frequency assignment, shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with ... these Regulations."

⁵ Again, this point is made in the context of harmful interference being provided to the FSS as it is operated today. Compounding this difficulty is the situation that would result if an FSS satellite were to be launched in five years to provide service to Canada and/or Mexico from a location over the United States, and offer a much more sensitive application than is provided or able to be provided today. The U.S. obligation under the RRs with respect to FS operations provided via No. 4.4 would remain intact, but with ubiquitously-deployed terminals in the field from the new FS operator, there would be no way to unring the bell. An allocation to the FS could very well prevent the U.S. from meeting its obligations under the ITU Convention and RRs.

availability (99.999%).”⁶ This type of critical application is unusual for a secondary service that will be forced to accept interference from primary users in the same frequency band,⁷ and it strains credibility to believe that protection for such services will not be sought by Petitioners in the future. Moreover, all of the Ku-band FSS applications for our U.S. government customers are designed to respond to emergency, national security and military situations. As a result, emergencies could result in a convergence of primary FSS and secondary, wireless CII terminals in the same area – leading to a situation whereby the secondary CII terminals’ functionality could be disrupted by harmful interference from the FSS terminals and thus the both FSS, including U.S. government, and CII terminals may not be able to accomplish emergency operations. It is incomprehensible that CII applications will be able to perform their critical functions as outlined in the Petition if they are licensed as a secondary service.

The Petitioners’ mention of using frequency coordination to protect the proposed secondary CII service from interference from the primary services operating in the 14.0-14.5 GHz band is particularly misplaced.⁸ Frequency coordination is not generally used between primary and secondary services, and the large number of FSS VSAT blanket license deployments and the freedom of location for such networks makes frequency coordination completely impracticable. This makes another key part of the Petitioners’ interference protection plan based on a flawed assumption.

⁶ *Petition* at attached RKF Report, § 2.

⁷ It takes less than two minutes of outages a day to preclude an application from meeting a 99.999% availability objective.

⁸ The Petitioners’ proposal envisions a “CII Coordinator” and satellite industry expert private entity working with the CII licensee who will be responsible for frequency coordination with other users in the 14.0-14.5 GHz band, among other tasks. *Petition* at 3, 14-15, 17, 19-20.

III. CONCLUSION

On the basis of the foregoing discussion, Artel urges the Commission to reject the UTC/Winchester Petition as fundamentally flawed and insubstantially justified. The 14.0-14.5 GHz uplink band is vitally important to the U.S. military and government agencies, and to the hundreds of millions of people who directly and indirectly rely on VSAT services every day.

The Commission should thus deny the UTC/Winchester Petition and urge the wireless industry to meet any CII and other commercial needs it may have in bands currently allocated for and available to fixed wireless users.

Respectfully submitted,

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